UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,600	03/29/2001	Larry Cecil Brown	RCA 90,306	3635

7590 09/02/2005

JOSEPH S. TRIPOLI
THOMSON MULTIMEDIA LICENSING INC.
2 INDEPENDENCE WAY
P. O. BOX 5312
PRINCETON, NJ 08543-5312

EXAMINER	
MOORE JR, MICHAEL J	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,600	BROWN ET AL.	
	Examiner	Art Unit	
	Michael J. Moore, Jr.	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Amendments made to claims **2, 3, 11-13, 15, 16, 19, 20, and 28-30** to obviate rejection under 35 U.S.C. § 112 2nd paragraph are proper and have been entered. These rejections have been withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-3, 5-20, and 22-30** are rejected under 35 U.S.C. 102(e) as being anticipated by Leano et al. (U.S. 6,453,472) ("Leano"). Leano teaches all of the limitations of the above listed claims with the reasoning that follows.

Regarding claim **1**, "a method for providing warning of impaired communication" is anticipated by the periodic ranging between a head-end (modem device) and a cable modem (remote site) spoken of on column 9, lines 31-47. "Retrieving a communication parameter value from memory" is anticipated by the obtaining of the cable modem power level input (communication parameter value) by the head-end hardware through periodic ranging as spoken of on column 9, lines 31-47. "Comparing the retrieved

communication parameter value with a predetermined threshold to identify an excessive communication parameter value indicative of a potential communication link impairment" is anticipated by the comparison of a particular cable modem input power level 605 (retrieved communication parameter value) and an adjusted power level 603 (predetermined threshold) to determine a difference 607 (excessive communication parameter value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Lastly, "initiating substantially periodic transmission of a message to the remote site indicating a system adjustment is necessary, in response to the comparison" is anticipated by the communication of the difference 607 to the cable modem (remote site) within the head-end's periodic ranging response as spoken of on column 11, lines 29-33.

Regarding claim **2**, "wherein the message includes the retrieved communication parameter value" is anticipated by the communication of the difference 607 (communication parameter value) to the cable modem (remote site) within the head-end's periodic ranging response as spoken of on column 11, lines 29-33.

Regarding claim **3**, "wherein the retrieved communication parameter represents transmission upstream power level for communicating from the modem device to the remote site" is anticipated by the obtaining of the cable modem power level input (transmission power level) by the head-end hardware through periodic ranging as spoken of on column 9, lines 31-47.

Regarding claim **5**, "receiving the predetermined threshold value from the remote site" is anticipated by the power adjustment command generated by a

user (remote site) as spoken of on column 8, lines 48-55 as well as the adjusted power level 603 shown in Figure 6.

Regarding claim **6**, "using a default predetermined threshold value prior to the receiving of the predetermined threshold value from the remote site" is anticipated by the initial ranging process spoken of in column 4, lines 19-31 where the head-end specifies particular power adjustments (default predetermined threshold value) for signals transmitted by the cable modem.

Regarding claim **7**, "configuring the modem device with the received predetermined threshold during an initialization operation" is anticipated by the ranging operation spoken of on column 9, lines 13-47.

Regarding claim **8**, "wherein the step of initiating substantially periodic transmission of the message comprises initiating transmission on one of a schedule, and a repetition frequency, received from the remote site" is anticipated by the communication of the difference 607 to the cable modem (remote site) within the head-end's periodic ranging response (schedule) to a ranging request as spoken of on column 11, lines 29-33.

Regarding claim **9**, "using default schedule or repetition frequency values prior to receiving the schedule or repetition frequency values from the remote site" is anticipated by the initial ranging process (schedule) spoken of in column 4, lines 19-31 where the head-end specifies particular power adjustments for signals transmitted by the cable modem.

Regarding claim **10**, "terminating transmission of the message upon the comparison step indicating the retrieved communication parameter value no

longer exceeds the predetermined threshold" is anticipated by column 11 lines 23-30, which states that upon comparison of input power level 605 and adjusted power level 603, if difference 607 is zero (retrieved parameter no longer exceeds predetermined threshold), then no adjustment is required.

Regarding claim **11**, "displaying at least one of, the retrieved communication parameter value, the predetermined threshold and repetition frequency of the periodic transmission, in response to a user command" is anticipated by the graphical user interface (display) of the CLI software spoken of on column 8, lines 48-65 where a power adjustment command (predetermined threshold) can be entered by a user.

Regarding claim **12**, "generating a web page for the displaying of the at least one of the retrieved communication parameter value, the predetermined threshold, and repetition frequency of the periodic transmission" is anticipated by the graphical user interface (web page) of the CLI software spoken of on column 8, lines 48-65 where a power adjustment command (predetermined threshold) can be entered by a user.

Regarding claim **13**, "a method for providing warning of impaired communication" is anticipated by the periodic ranging between a head-end (modem device) and a cable modem (remote site) spoken of on column 9, lines 31-47. "Retrieving a communication parameter value from memory" is anticipated by the obtaining of the cable modem power level input (communication parameter value) by the head-end hardware through periodic ranging as spoken of on column 9, lines 31-47. "Comparing the retrieved

communication parameter value with a predetermined threshold to identify an excessive communication parameter value indicative of a potential communication link impairment" is anticipated by the comparison of a particular cable modem input power level 605 (retrieved communication parameter value) and an adjusted power level 603 (predetermined threshold) to determine a difference 607 (excessive communication parameter value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Lastly, "initiating substantially periodic transmission of a message including the retrieved communication parameter value to the remote site indicating a system adjustment is necessary, in response to the comparison" is anticipated by the communication of the difference 607 (communication parameter value) to the cable modem (remote site) within the head-end's periodic ranging response as spoken of on column 11, lines 29-33.

Regarding claim **14**, "receiving the predetermined threshold value from the remote site" is anticipated by the power adjustment command generated by a user (remote site) as spoken of on column 8, lines 48-55 as well as the adjusted power level 603 shown in Figure 6.

Regarding claim **15**, "wherein the retrieved communication parameter value represents transmission upstream power level for communicating from the device to the remote site" is anticipated by the obtaining of the cable modem power level input (transmission power level) by the head-end hardware through periodic ranging as spoken of on column 9, lines 31-47.

Regarding claim **16**, "a method for providing warning of impaired communication" is anticipated by the periodic ranging between a head-end (modem device) and a cable modem (remote site) spoken of on column 9, lines 31-47. "Retrieving a transmission power level value from memory" is anticipated by the obtaining of the cable modem power level input (transmission power level value) by the head-end hardware through periodic ranging as spoken of on column 9, lines 31-47. "Comparing the retrieved transmission power level value with a predetermined threshold to identify an excessive transmission power level value indicative of a potential communication link impairment" is anticipated by the comparison of a particular cable modem input power level 605 (retrieved transmission power level value) and an adjusted power level 603 (predetermined threshold) to determine a difference 607 (excessive transmission power level value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Lastly, "initiating substantially periodic transmission of a message including the retrieved transmission power level value to the remote site indicating a system adjustment is necessary, in response to the comparison" is anticipated by the communication of the difference 607 (transmission power level value) to the cable modem (remote site) within the head-end's periodic ranging response as spoken of on column 11, lines 29-33.

Regarding claim **17**, "terminating transmission of the message upon the comparison step indicating the retrieved transmission power level value no longer exceeds the predetermined threshold" is anticipated by column 11 lines 23-30, which states that upon comparison of input power level 605 and adjusted

power level 603, if difference 607 is zero (transmission power level value no longer exceeds predetermined threshold), then no adjustment is required.

Regarding claim **18**, "A device for providing warning of impaired communication" is anticipated by the periodic ranging between a head-end (modem device) and a cable modem (remote site) spoken of on column 9, lines 31-47. "Means for retrieving a communication parameter value from memory" is anticipated by the obtaining of the cable modem power level input (communication parameter value) by the head-end hardware (means) through periodic ranging as spoken of on column 9, lines 31-47. "Means for comparing the retrieved communication parameter value with a predetermined threshold to identify an excessive communication parameter value indicative of a potential communication link impairment" is anticipated by the comparison of a particular cable modem input power level 605 (retrieved communication parameter value) and an adjusted power level 603 (predetermined threshold) by comparator 601 (means) to determine a difference 607 (excessive communication parameter value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Lastly, "means for initiating substantially periodic transmission of a message to the remote site indicating a system adjustment is necessary, in response to the comparison" is anticipated by the communication of the difference 607 (communication parameter value) to the cable modem (remote site) within the head-end's (means) periodic ranging response as spoken of on column 11, lines 29-33.

Regarding claim **19**, "wherein the message includes the retrieved communication parameter value" is anticipated by the communication of the difference 607 (communication parameter value) to the cable modem (remote site) within the head-end's periodic ranging response as spoken of on column 11, lines 29-33.

Regarding claim **20**, "wherein the retrieved communication parameter value represents transmission upstream power level for communicating from the device to the remote site" is anticipated by the obtaining of the cable modem power level input (transmission power level) by the head-end hardware through periodic ranging as spoken of on column 9, lines 31-47.

Regarding claim **22**, "means for receiving the predetermined threshold value from the remote site" is anticipated by the power adjustment command generated by a user (remote site) as spoken of on column 8, lines 48-55 as well as the adjusted power level 603 received by comparator 601 shown in Figure 6 and spoken of on column 11, lines 23-25.

Regarding claim **23**, "means for using a default predetermined threshold value prior to the receiving of the predetermined threshold value from the remote site" is anticipated by the initial ranging process spoken of in column 4, lines 19-31 where the head-end (means) specifies particular power adjustments (default predetermined threshold value) for signals transmitted by the cable modem.

Regarding claim **24**, "means for configuring the modem device with the received predetermined threshold during an initialization operation" is anticipated

by the ranging operation spoken of on column 9, lines 13-47 between a head-end (means) and a cable modem.

Regarding claim **25**, "wherein the means for initiating substantially periodic transmission of the message further comprises means for initiating transmission on one of a schedule, and a repetition frequency, received from the remote site" is anticipated by the communication of the difference 607 to the cable modem (remote site) within the head-end's (means) periodic ranging response (schedule) to a ranging request as spoken of on column 11, lines 29-33.

Regarding claim **26**, "means for utilizing default schedule or repetition frequency values prior to receiving the schedule or repetition frequency values from the remote site" is anticipated by the initial ranging process (schedule) spoken of in column 4, lines 19-31 where the head-end (means) specifies particular power adjustments for signals transmitted by the cable modem.

Regarding claim **27**, "means for terminating transmission of the message if the means for comparison indicates that the retrieved communication parameter value no longer exceeds the predetermined threshold" is anticipated by column 11 lines 23-30, which states that upon comparison of input power level 605 and adjusted power level 603 by comparator 601 (means), if difference 607 is zero (retrieved communication parameter no longer exceeds predetermined threshold), then no adjustment is required.

Regarding claim **28**, "means for displaying at least one of, the retrieved communication parameter value, the predetermined threshold and repetition frequency of the periodic transmission, in response to a user command" is

anticipated by the graphical user interface (means for displaying) of the CLI software spoken of on column 8, lines 48-65 where a power adjustment command (predetermined threshold) can be entered by a user.

Regarding claim **29**, "means for generating a web page for the displaying of the at least one of the retrieved communication parameter value, the predetermined threshold, and repetition frequency of the periodic transmission" is anticipated by the graphical user interface (means for generating a web page) of the CLI software spoken of on column 8, lines 48-65 where a power adjustment command (predetermined threshold) can be entered by a user.

Regarding claim **30**, "Means for retrieving a transmission power level value from memory" is anticipated by the obtaining of the cable modem power level input (transmission power level value) by the head-end hardware (means) through periodic ranging as spoken of on column 9, lines 31-47. "Means for comparing the retrieved transmission power level value with a predetermined threshold to identify a transmission power level value indicative of a potential communication link impairment" is anticipated by the comparison of a particular cable modem input power level 605 (retrieved transmission power level value) and an adjusted power level 603 (predetermined threshold) by comparator 601 (means) to determine a difference 607 (transmission power level value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Lastly, "means for launching a message, the message indicating that a system adjustment is necessary, to a remote site should the retrieved transmission power level value be at a value indicative of a potential communication link impairment" is

anticipated by the communication of the difference 607 (transmission power level value) to the cable modem (remote site) within the head-end's (means) periodic ranging response as spoken of on column 11, lines 29-33.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims **4 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Leano et al. (U.S. 6,453,472) ("Leano") in view of Chen et al. (U.S. 6,588,016) ("Chen").

Regarding claim **4**, Leano teaches the method of claim **1**. Leano also teaches the comparison of a particular cable modem input power level 605

(retrieved communication parameter value) and an adjusted power level 603 (predetermined threshold) to determine a difference 607 (excessive communication parameter value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Leano fails to teach a cable modem that uses simple network management protocol (SNMP) for transmission. However, Chen teaches a system in Figure 1 containing a CMTS and a cable modem where Network Management Station 132 monitors the CMTS and cable modems using SNMP as spoken of on column 3, lines 7-14. At the time of the invention, it would have been obvious to someone skilled in the art to combine the teachings of Leano with the SNMP teachings of Chen in order to provide a transmission method using a protocol known in the DOCSIS standard.

Regarding claim **21**, Leano teaches the device of claim **18**. Leano also teaches the comparison of a particular cable modem input power level 605 (retrieved communication parameter value) and an adjusted power level 603 (predetermined threshold) by comparator 601 (means) to determine a difference 607 (excessive communication parameter value) as spoken of on column 11, lines 20-33 and shown in Figure 6. Leano fails to teach a cable modem that uses simple network management protocol (SNMP) for transmission. However, Chen teaches a system in Figure 1 containing a CMTS and a cable modem where Network Management Station 132 monitors the CMTS and cable modems using SNMP as spoken of on column 3, lines 7-14. At the time of the invention, it would have been obvious to someone skilled in the art to combine the teachings

of Leano with the SNMP teachings of Chen in order to provide a transmission method using a protocol known in the DOCSIS standard.

Response to Arguments

6. Applicant's arguments filed 6/20/2005 have been fully considered but they are not persuasive.

Regarding amended independent claims **1, 13, 16, 18, and 30,** Applicant argues that Leano does not disclose a modem for receiving/retrieving a parameter and for performing a comparison of that parameter with a predetermined threshold as recited in these claims. Applicant further argues that Leano discloses, *"the head end's hardware is configured to compare the power level input from the cable modem with an adjusted power level"*. However, it is held that a head end is a modem device that contains a CMTS that is used for modulating and demodulating data to and from the cable system (See column 2, lines 31-47 of Leano). Therefore, it is held that Leano discloses a modem for receiving/retrieving a parameter (power level input) and for performing a comparison of that parameter with a predetermined threshold (adjusted power level).

Applicant also argues that Leano does not teach *"initiating substantially periodic transmission of a message to the remote site indicating a system adjustment is necessary in response to the comparison"* as recited in claims **1 and 18**.

Applicant also argues that Leano does not teach *"initiating substantially periodic transmission of a message including the retrieved communication*

parameter value to the remote site indicating a system adjustment is necessary in response to the comparison" as recited in claim **13**.

Applicant also argues that Leano does not teach *"initiating substantially periodic transmission of a message including the retrieved transmission power level value to the remote site indicating a system adjustment is necessary in response to the comparison"* as recited in claim **16**.

Applicant also argues that Leano does not teach *"means for launching a message, the message indicating that a system adjustment is necessary, to a remote site should the retrieved transmission power level value be at a value indicative of a potential communication link impairment"* as recited in claim **30**.

Applicant further argues that Leano discloses, *"the head end then sends a response to the particular cable modem's ranging request indicating that the cable modem must adjust its power level to the adjusted power level.* As stated above, it is held that a head end is a modem device. Therefore, it is held that Leano discloses transmitting a message to a remote site (cable modem) indicating that a power level adjustment is needed.

Applicant also argues *"while the actual value used in the comparison is included in the message sent to a remote site as claimed in claims **13 and 16**, Leano discloses sending a difference value (which is not a value that was used in the comparison) from the head end to the modem".* However, the difference value is a value calculated from the comparison of the cable modem input power level 605 (retrieved communication parameter value) and an adjusted power level 603 (predetermined threshold). It is held that this difference value therefore

includes the cable modem input power level 605 (retrieved communication parameter value). Therefore, it is held that Leano teaches the limitations of claims **13 and 16** as described above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

mjm MM

FRANK DUONG
PRIMARY EXAMINER